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**Syngenta Crop Protection, Inc.** Tel 336 632 6000
P.O. Box 18300
Greensboro, NC 27419-8300
www.syngenta.com

syngenta

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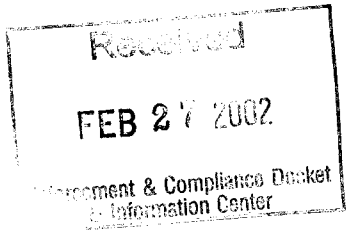


United States Environmental Protection Agency
Enforcement and Compliance Docket and Information Center
(Mail Code 2201A)
Attn: Docket Number EC-2000-007
1200 Pennsylvania Avenue NW
Washington, DC 20460

Dear Sir:

***Subject: Response to EPA Proposed Rule RE: Establishment of Electronic Reporting; Electronic Records, 40 CFR Part 3***

Syngenta Crop Protection, Inc. ("Syngenta") appreciates this opportunity to submit comments on the proposed rule, "Establishment of Electronic Reporting: Electronic Records" ("CROMERRR" or "Proposed Rule"). Syngenta is committed to sustainable agriculture through innovative research and technology. Syngenta was formed in November 2000 by the merger of Novartis Agribusiness and Zeneca Agrochemicals.

Syngenta, as well as other companies that develop, manufacture and market products containing pesticide active ingredients, will be significantly affected by the proposed rule if it is finalized. Such companies already comply with the detailed and comprehensive regulatory schemes set forth in the 40 CFR volumes, including those regulations implementing FIFRA, TSCA and GLP. In addition, facilities that develop and manufacture these compounds comply with environmental requirements that require extensive documentation to demonstrate compliance.

Syngenta currently supports 705 active registered products, with several others in development. Typically, a new submission requires over 100 volumes of data and information, and one volume can range in length from 5 pages to over 1000 pages with the page number averaging about 200 in each volume. Finally, in order to maintain a product's registration, these documents must be kept for a number of years. We respectfully request that the Agency consider these facts as it evaluates the comments submitted below.

Syngenta believes that a process for electronic reporting and record keeping has the potential for being a valuable asset for the agricultural chemical industry. However, the current proposed rule seems to be selectively focused on easing the burden for only those industries required to provide environmental compliance monitoring data to the EPA. It appears that the myriad submission activities required for the registration of a new pesticide or to maintain current registrations, and the volumes of documents that continually pass between registrants and the EPA, were not sufficiently analyzed in this proposed rule.

Throughout the proposed rule text, there is no mention of FIFRA, TSCA, GLPS, 40 CFR Part 160, 40 CFR Part 792, etc. This premise is further supported by the following statement, "This proposed rule is not subject to Executive Order 13045 because it is not an economically significant action as defined by Executive Order 12866 and *it does not involve decisions regarding environmental health or safety risks. This rule develops technical procedures for the voluntary submission of environmental compliance data electronically.*" In addition, the statement that this is a "voluntary" program should be emphasized, although, in reality, if a rule such as this were promulgated, companies like Syngenta would be compelled to comply.

The preamble of the proposed rule continually refers to environmental reports. In the summary on page 46162, it is stated "The proposal also sets forth the conditions under which EPA will allow an electronic record to satisfy *federal environmental record-keeping requirements* in EPA's regulations." On page 46164, the proposed rule states "In the case of electronic reporting, EPA plans to move aggressively toward implementation of CDX *for high volume environmental reports submitted directly to EPA.* EPA will publish announcements in the Federal Register as CDX and other systems become available for *particular environmental reports* and as programs become ready to make electronic record-keeping an option."

In order to obtain pesticide registrations, the agricultural community conducts and submits to the EPA required guideline studies, supplies required analytical data, validated analytical methods, and labels (multi-page, written, printed and/or graphic matter characterizing a specific product and its directions for use). Computers and hundreds of computer programs are used to generate almost all study-supported data. Computer systems are used to generate protocols, methods, final reports, amendments, deviations, master schedule, standard operating procedures (SOPs), training records, curricula vitae (CV), QA audit reports, QA statements, standard labels, sample labels, chain of custody forms, and various instrumental data. Computers and software programs are used to link instrument output into standardized forms, which are easily recognizable and customized. E-mail is used to distribute almost all of the previously mentioned items. Most of these data exists electronically; however, in the U.S. our raw data are currently defined as the humanly readable paper copy with an original "wet" signature. This procedure differs within the facilities we have in countries outside of the U.S. In many of these facilities, a large portion of the data is defined as electronic data. Magnetic/optical media is used to store the data generated by many analytical systems. Analytical systems are validated and these systems use backups and archival processes for data collection.

Our business electronic reporting schematic resembles the following:

Electronic Signal > Data Collection > Data Reduction via LIMS, EXCEL, Other > Report > Report Approval > Electronic Submission

**AND**:

Correspondence > Document Required > Document > Electronic Submission

Syngenta's global Research and Technology Department currently uses in excess of 1100 programs. "Programs" here refers to the many computer programs and systems used in the management of the Good Laboratory Practice Process from developing a study plan, communicating, shipping, tracking, analyzing, archiving, monitoring, and creating, archiving, and submitting a final report to regulatory officials. Programs may include sample tracking systems, chromatographic management systems, toxicology animal data recording systems, statistical programs, spread sheets, data bases, report writing and processing, and archival and retrieval systems. Based on the definition of a computer system in CROMERRR, practically all of these could fall under the proposed rule. Many of these programs are commercial packages with no audit trails and they cannot be made compliant without new versions from the vendors or extensive internal programming efforts.

We believe the costs for implementing and maintaining electronic record keeping systems are grossly underestimated in the proposed rule. Each facility does not have just a single system. Facilities, in general, have many systems and a large corporation, operating in a global environment, may have hundreds of systems. Under the proposed rule, these systems would have to be linked. The proposed rule provides an estimate of $40,000 per facility the first year and $17,000 in succeeding years. We believe this expense is underestimated at least by half what the cost will be. An evaluation would have to be made on each system to determine if the system can be upgraded or if it must be replaced. Regardless, a manpower requirement is needed to conduct needed programming, installation, training, and maintenance of systems, whether they are new systems or upgraded systems. Programs and systems do not run alone. Systems have to be programmed to operate and perform the needed functions within the matrix they are part of. Thus, a conservative estimate for Syngenta alone is in the ballpark of $20 million dollars when we account for the number of systems, our global environment, and the 20 plus facilities impacted by this rule. These are significant costs that have not been adequately considered by the Agency.

Furthermore, the significant differences in the scope and requirements of 40 CFR Part 160 were not evaluated in the proposed rule. Part 160 requires that registrants maintain all data for the life of the product. The life time span for many products exceeds 30 years. This means that for 30 years or greater, more than 100 volumes of data need to be maintained for each product. This means migration of data is required as systems change and are updated over time. These are significant costs that have not been adequately considered by the Agency.

Instead of responding to the entire proposed rule, we will provide inputs in several critical areas for the crop protection business. Our comments below are divided into the general topics of electronic submissions, archival and electronic records, contract facilities conducting studies for pesticide registrations, and miscellaneous.

**Electronic submissions**

Our first major area of clarification is the lack of focus or direction in the proposed rule to actively extend this opportunity to the pesticide regulated industry. Our questions arise from the fact that the present focus is on environmental reports required by the EPA, the lack of consideration of the FIFRA/TSCA submissions, and the probable inability of the CDX to handle the extremely large volumes associated with pesticide submissions. As mentioned above, nowhere in the proposed rule is FIFRA, TSCA, GLPS, 40 CFR Part 160 or Part 792 mentioned. The rule even goes as far as stating "it does not apply to decisions regarding environmental health or safety risks." From the information previously shared at public meetings, it appears the Office of Environmental Information (OEI) did not consider the FIFRA program and is not aware of the extent of electronic record-keeping currently being used by the pesticide industry. When the proposal was drafted, thought had not been given to having submissions of 100 plus volumes coming across the CDX.

If CROMERRR, as stated in the Preamble Part IV B4, page 41670, is intended to be consistent with FDA 21 CFR Part 11, it is recommended CROMERRR should clearly state the requirements for system controls to be used under 40 CFR Parts 160 and 792. For example, what system controls are needed for establishment and implementation of written policies that limit system access to authorized individuals? What system controls are needed for accountability of individuals with respect to electronic signature falsification and falsification of records? What system controls are needed for the use of device checks? What system controls are needed for encryption with respect to open systems? What controls are needed for system validations? What policies on education and training of IT staff are needed?

And, if CROMERRR intended to be consistent with 21 CFR Part 11, the concept of an organization (rather than an individual) having an electronic signature is contrary to Part 11. For many agricultural submissions, several people may well be involved. Please clarify.

In Preamble III C, page 46169, the EPA plans to give priority to reports that do not involve the submission of confidential business information (CBI). It is recommended provisions be made for the CDX to accommodate CBI submissions from FIFRA/TSCA submitters since it is common for CBI to be part of regulatory submissions.

In Preamble Section V B3, pages 46182-3, the minimum requirements for the client's PC are stated. The latest version of Microsoft Windows NT is listed. However, Windows

2000 is not included in these options and will soon be the standard at Syngenta. The company is also concerned about the emphasis on the Microsoft Windows environment since not all of its computer systems globally operate in this arena. Additional processors and operating systems need to be accommodated.

In Subpart A, Section 3.3, Definitions, it is suggested a computer system be defined. Does a computer system mean LIMS, or computerized analytical instruments, etc.? In addition, a digital signature is not defined. We suggest defining both of these terms for clarification.

In Subpart B, Section 3.10, the electronic signature must meet the validation requirements of the electronic document receiving system to which it is submitted. Please clarify the meaning of the term "validation." This term usually applies to the process to ensure consistent performance of a computer system. It is suggested the term be included in Section 3.3, Definitions, and the validation requirements should be presented.

In Subpart B, Section 3.20, how will EPA provide notice of changes to the CDX? It is recommended EPA clarify what the backup procedures will be for the CDX and the procedures which will be followed when the system is not operational.

**Archival and Electronic Records**

Given CROMERRR's definition of an electronic record in Subpart A, General Provisions, Sec. 3.3, Definitions, it would appear all previously mentioned documents and their supporting software and hardware would fall under the electronic record keeping rule. Thus, the following questions need clarification:

Subpart A

Is the electronic record-keeping rule intended for all documents supporting a registration or is it intended for those systems which submit data electronically?

Would digital photographs fall under the record-keeping rule?

Shouldn't the rule also address validation, change control, and system upgrades?

Should the Agency distinguish between open and closed systems as defined in 21 CFR Part 11?

Subpart C

Will the Agency expect sponsor companies to support legacy systems for data recording, e.g., chromatographic, and archive databases as implied in Sec. 3.100 (a)(2) and (b)? If so, for what period of time?

If documents are sent via e-mail, will back-ups of e-mail be required as implied in Sec. 3.100 (a)(2) and (b)? Will e-mail have to be validated?

If original SOPs (signed paper copies) are scanned and distributed through a company Intranet, will the systems used to produce the scan have to be validated and maintained? If documents are sent via e-mail, will back-ups of e-mail be required as implied in Sec. 3.100 (a)(2) and (b)?

At what point should an audit trail start for data recording systems as stated in Sec. 3.100 (a)(6)? Is it at the point when the information is inside the instrument or when the data are transferred to a LIMS?

The signals from some instruments are not in a human readable form until they are downloaded and a paper copy is printed such as the HOBO data logger (a patented temperature monitoring device). Will the electronic signal need to be maintained for these types of instruments? If so, how does the Agency intend to audit such types of media as implied in Sec. 3.100 (a)(8)?

Since our company is international, how will time-stamped audit trails be affected if data is being sent and received in different time zones as stated in Sec. 3.100 (a)(6)?

If planning systems are used to generate the master schedule, will these systems have to be validated and maintained in their entirety if only a small portion of the system is used for GLP purposes as implied in Sec. 3.100 (a)(2)?

If correspondence is sent via the Internet, will these procedures have to be maintained as stated in Sec. 3.100 (a)(2)?

If there is an update in a computer software program during the course of a study and some forms (format of data) are printed before and after the update and changes are made in the form, how would the Agency treat this discrepancy since most audit trails do not capture system upgrades per Sec. 3.100 (a)(6)?

What is intended for off-site review of the electronic record as stated in Sec. 3.100 (a)(3)?

There is a contradiction in the requirement for retention. If electronic records are to be maintained without alteration, how can these records be migrated to future computer technologies? As technology changes, e-records will have to be migrated to new systems. The rule must be amended to permit these necessary transitions.

How can regulated personnel ensure the security of their electronic signature, since the system administrator would always have access to these signatures?

How will the signatories from non-U.S. citizens be verified? This will be a common concern with all corporations operating globally.

Will migration software have to be validated? How can this process work for all systems?

**Contract Research Facilities:**

The agricultural industry regulated by FIFRA, 40 CFR Part 160, has generated and stored data on electronic systems for many years. This industry has thousands of data systems generating data. Thus, it is not an option, i.e., not voluntary, for this industry to choose not to use electronic data acquisition, data storage, and transmission. It is also consequently not voluntary for the over 1000 small contract facilities to not be part of this electronic mandate if they survive to support the generation of studies for the agricultural industry.

It is conservatively estimated over $40,000 per facility will be required for each of these contractors to come under the proposed rule.

Given the fact this industry has billions of reports and data sheets currently and intimately supporting pesticide registrations, the non-acceptance of paper and electronic data by the proposed rule is not a reasonable and practical option for the industry. There must be some concessions made to keep these reports and data viable and useful in the process. One possibility, since it is clear that electronic records will form the basis for electronic submissions and for EPA audits of the process, is to adopt a risk-based, phase-in approach. This would enable the industry to achieve compliance over a realistic period of time in a manner reflecting both the potential risks and benefits to public health, together with the associated feasibility, costs, and risks to the industry.

The number of contract research organizations that contribute to the data generated by the agricultural industry is very large. A few years ago, EPA estimated there were over 1800 such organizations. The global harmonization of the GLPs has opened the door for the use of global contract facilities. The facility types vary from field sites, analytical laboratories, and facilities capable of large mesocosm studies, raw agricultural processors, large and small animal laboratories, etc. There is an immense financial burden to require these facilities to adapt their systems to handle the proposed electronic reporting and electronic records proposed rule. If these facilities wish to remain in business as the industry operates today, these facilities will have no choice but to follow what is required of the larger agricultural businesses. Thus again, the choice is not a voluntary decision, as the decision requires certain levels of technology most do not have and the technological expertise to operate the systems as required. CROMERRR will not be voluntary for these facilities and they will be required to purchase expensive upgrades to their existing systems and to retain the technological expertise to operate efficiently and effectively.

Systems used by the contract research organizations must be compatible with the EPA's CDX and the sponsor's technology. All data and electronic transactions must be protected, trackable, and secure during the transfer from the contract facility to the sponsor's site. Plus, all aspects must be able to be forwarded to the CDX without change and modifications. The proposed rule will make data capture methods such as data loggers unviable and challenge many other data acquisition instrumentation and recorders.

We respectfully submit these comments, questions, and concerns based on our interpretation and understanding of the Proposed Rule for Establishment of Electronic Reporting; Electronic Records, published in the Federal Register on Friday, August 31, 2001. The numerous unresolved issues illustrated in the discussion above point to the need for further stakeholder consideration of many aspects of electronic reporting and record keeping before finalizing a proposed rule on this matter. Finally, it appears that FIFRA and TSCA were not meant to be included in this rulemaking, although this is not clearly stated in the current proposed rule. We expect that this will be addressed in subsequent revisions of this rule.

Sincerely,

G. Thomas Gale, Jr.

Tom Gale
QAU Team Leader
Syngenta Crop Protection
tom.gale@syngenta.com
336-632-2473